

ABSTRACT OF THE DISCLOSURE

Stabilized capacitors and DRAM cells using high dielectric constant oxide dielectric materials such as Ta_2O_5 and $Ba_xSr_{(1-x)}TiO_3$, and methods of making such capacitors and DRAM cells are provided. A preferred method includes providing a conductive oxide electrode, depositing a first layer of a high dielectric constant oxide dielectric material on the conductive oxide electrode, oxidizing the conductive oxide electrode and the first layer of the high dielectric constant oxide dielectric material under oxidizing conditions, depositing a second layer of the high dielectric constant oxide dielectric material on the first layer of the dielectric, and depositing an upper layer electrode on the second layer of the high dielectric constant oxide dielectric material.